

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Numbering Resource Optimization)	CC Docket 99-200
)	
Petitions for Waiver of Commission's Rules)	
Regarding Access to Numbering Resources)	
)	
)	

COMMENTS OF TWILIO INC.

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Twilio Inc. (“Twilio”) submits these comments in response to the Federal Communications Commission’s (“Commission’s”) Public Notice to refresh the record on several petitions for waiver of certain rules regarding access to numbering resources for VoIP providers. DA 11-2074 (Dec. 27, 2011). Although Twilio does not have a petition for waiver pending, it provides general comments as follows:

Twilio generally supports the proposition reflected in Vonage Holdings Corp.’s (“Vonage’s”) petition for waiver, Vonage’s recent *ex partes*, and other petitions for waiver: VoIP providers should have direct access to numbering resources. Direct access to numbering resources for VoIP providers would provide a number of benefits to the public because it would encourage the development of new products and services by VoIP providers. Numbering resources are a critical component to many VoIP services, but currently can only be acquired indirectly by VoIP providers. This indirect access may have made sense historically, but as both interconnected and non-interconnected VoIP providers are presently subject to the Commission’s regulations, VoIP should have the benefit of direct access to numbering resources. Although VoIP services have expanded despite this limitation on access to numbering resources, increased availability would further support the expansion of VoIP services because a critical component of those services would be more widely available. VoIP providers would benefit from the certainty and flexibility that direct access would provide by ensuring a reliable alternative means of obtaining valuable numbering resources not currently available. Direct access to numbering resources will thus increase competition among providers to the benefit of the public.

If the Commission has any concerns about direct access to numbering resources for VoIP providers, the Commission should simply place appropriate conditions on that access to alleviate those concerns, as Vonage suggests. VoIP providers are already regulated in a number

of ways to ensure that the benefits of VoIP service are available to consumers, and that there is appropriate supervision for consumer protection and public policy purposes. Similarly, pragmatic conditions on direct access to numbering resources for VoIP providers is an entirely reasonable way to permit access to a valuable resource and encourage innovation and innovative companies, all the while providing any necessary oversight and ensuring any technical concerns are addressed. The existence of unspecified “concerns” does not justify ongoing restrictions on direct access to telephone numbers.

I. TWILIO

Twilio was founded three years ago as an innovative Internet-based cloud communications company that is reinventing telecom by merging cloud computing, web services, and traditional telecommunications. Twilio hosts a telephony infrastructure web service in the cloud, allowing web developers to integrate phone calls, text messages, and IP voice communications into their web, mobile, and traditional phone applications. Using Twilio, a company can integrate each of these different communication methods into a single product. In short, Twilio takes things that are complicated about telecommunications and makes them simple.

Using Twilio’s simple developer tools, web developers and businesses can build sophisticated unified communications solutions such as call centers, office phone systems, call tracking tools, and more that interoperate with multiple telephone networks. Twilio’s service integrates with traditional phone service and text messages/SMS using Twilio’s existing web service APIs for making and receiving phone calls and text messages. One of Twilio’s products, Twilio Client, also allows web developers to build Skype-like voice capabilities with just a few lines of code. Twilio’s products work simultaneously across platforms, allowing web browsers, mobile phones, and tablets running iOS or Android to communicate seamlessly. Over 70,000

developers use Twilio to integrate telecommunications into their applications and products. Finally, Twilio is quickly expanding internationally, having recently launched in the United Kingdom and much of Europe.

By making telecommunications integration in web, mobile, and app products easy for developers, Twilio benefits consumers by providing them with a host of new products and services that otherwise would not be possible. Many companies and organizations are using Twilio to simplify their telecommunications needs to the benefit of their customers and users. For example, Intuit Inc. used Twilio to develop a new security feature which sends a verification code to the an online user's phone, via phone call or SMS, when an online user attempts to change sensitive data.¹ This minimally intrusive security feature prevents identity theft while relying on the cloud to save time and money in implementation. Many companies and organizations have used Twilio's voice products to create new services for users or more efficiently manage existing products. The Democratic National Committee was able to inexpensively scale its voter fraud protection hotline for the 2010 elections using Twilio to handle thousands of calls at a fraction of the cost of using legacy systems.² StubHub, a subsidiary of eBay, used Twilio to create an automated call to confirm that tickets were still available after a buyer decided on a purchase.³ These and many other innovative ideas would not be possible without Twilio.

In short, Twilio is part of a new generation of companies involved in telecommunications that are benefiting consumers by enabling innovative new applications, products, and services. By allowing developers to easily integrate telecommunications into their

¹ <http://www.twilio.com/gallery/customers/intuit>.

² <http://www.twilio.com/gallery/customers/democratic-national-committee>.

³ <http://www.twilio.com/gallery/customers/ebay>.

products and applications, Twilio is an important and unique part of the mobile ecosystem. Twilio's interest in direct access to numbering resources stems from its status as VoIP provider and its present requirement to obtain telephone number through contracts with wholesale carriers. Twilio welcomes the chance to comment on how this issue affects it, its customers, and the public.

II. COMMENTS

Twilio commends the Commission for considering direct access to numbering resources for VoIP providers, and strongly encourages the Commission to allow such access. Twilio leaves it to the Commission to determine the most effective procedural vehicle, be it waiver , as used in the past for SBC Internet Services, Inc., or as now requested by Vonage and others, or through a rulemaking proceeding as suggested in *ex partes* by Comptel and Level 3 Communications, LLC. However such access is achieved, it is clearly an important step in encouraging telecommunications innovation and supporting VoIP providers' services to consumers.

Making numbering resources more freely available to VoIP providers can only be a good thing for consumers, because it will lower prices, encourage innovation in VoIP services, and encourage competition among providers. Like any valuable resource, the easier numbering resources are to obtain, the more productive uses they can be put to.

A. The Benefits Of Direct Access

Numerous benefits would flow to consumers if VoIP providers had direct access to numbering resources. Presently, Twilio and other VoIP companies must enter contracts with local exchange carriers ("LECs") to obtain numbering resources that they can then use to develop their products and services for consumers. The contracts typically provide for various network services, and often include access to telephone numbers. In some cases LECs

effectively “sell” only phone numbers without any corresponding product offering. In such an instance, the LEC merely acts as a middleman between the VoIP provider and the numbering resource as a result of the Commission’s regulation. Elimination of such regulations, by waiver or otherwise, would let the market be the judge of the best allocation of telephone numbers. VoIP providers would obtain numbers from LECs when a network service had a numbering component; other times the VoIP provider would have the option of obtaining numbers directly. Because there would be an alternative source for such numbers, LECs may induce VoIP providers to continue obtaining numbers through LECs by lowering prices or bundling other services with telephone numbers. Like any valuable resource, increased availability would cause downward pressure on pricing of that resource. In turn, VoIP providers could take advantage of those lower prices, whether through contracts with LECs or through direct access, to develop and expand their products and services to the benefit of consumers; as well as potentially directly lower their own prices to consumers.

Direct access to numbering resources would also allow VoIP providers to easily develop new products and services for their customers because a key component of those products and services would be easier to obtain. As Twilio developed a new product or service, it would understand at once its own numbering resources without the need for a middleman to obtain those resources. As Vonage notes, services like SMS and caller ID could be offered more easily than the present because of the need to obtain numbering resources indirectly. And, porting could be done much more simply as well, to the benefit of consumers wanting to change providers. Any number of new VoIP-based products could be quickly developed with direct access to numbering resources.

B. Any Concerns Can Be Addressed Through Appropriate Conditions

VoIP products and services compete with traditional telephony and benefit consumers. The Commission has recognized the benefits that VoIP services provide to the public.⁴ The Commission has and should continue to encourage the development of VoIP. Direct access to numbering resources would undoubtedly do so by making VoIP-based offerings less expensive and expanding the number of businesses able to access valuable numbering resources. At the same time, VoIP providers, both interconnected and non-interconnected, are subject to a number of regulations that protect consumers and fulfill other public policy objectives. Thus, the Commission has shown that it understands the benefits that VoIP options provide to consumers, but that certain measures should be taken to ensure appropriate oversight.

Direct access to numbering resources is no different and is consistent with the Commission's encouragement of VoIP while maintaining appropriate oversight. To the extent the Commission has special concerns about direct access to numbering resources for VoIP Providers, the Commission can place appropriate conditions on that access to ensure consumers are protected and other public policy goals objectives are satisfied. The conditions Vonage identifies are generally appropriate for such access. A requirement of some level of number utilization will ensure that numbers are not sitting unused, and will alleviate any concerns about numbering exhaustion. Additionally, it is reasonable that VoIP providers are subject to the same requirements as a LEC obtaining numbering resources regarding utilization and optimization. These proposed conditions mirror the conditions that carriers must satisfy for their own access to numbering resources, and, thus, are presumptively reasonable. Moreover, Vonage's offer to negotiate IP interconnection with other carriers and providers will hasten the move to an all-IP

⁴ See e.g., *In re IP-Enabled Services*, 19 F.C.C. Rcd. 4863, ¶ 5 (2004)

network and ensure that any issues with routing, through the directly-acquired numbers, will be minimized. The benefits of direct access to numbering resources for VoIP providers far outweigh any concerns about such access. The existence of concerns alone is not sufficient to deny access altogether, especially when considered against the benefits to public in encouraging VoIP services.

III. CONCLUSION

Twilio strongly encourages the Commission to allow VoIP providers direct access to numbering resources. Such access would encourage the continued development of VoIP products and services that benefit the public and advance telecommunications technology. Any concerns about such access can be cured through appropriate conditions. The Commission should allow VoIP providers direct access to numbering resources.

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Respectfully submitted,

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